

Appendix B

**Memorandum to Carl Wilcox from Dave Contreras (CDFG) dated July 7, 2011 Subject:  
2011 Summer Towner Survey Delta Smelt Index (Attached)**



## Memorandum

Date: July 7, 2011

To: Carl Wilcox  
Regional Manager  
Region 3, Bay Delta

From: Dave Contreras  
Associate Biologist  
Region 3, Bay-Delta

Subject: 2011 Summer Townet Survey Delta Smelt Index

The Summer Townet Survey (TNS) age-0 delta smelt abundance index for 2011 is **2.2**.

This index is the highest recorded since 2004; however it remains low compared to indices of the late 1990s and early 2000s (Figure 1). The TNS age-0 delta smelt abundance index is calculated as the mean of the first 2 survey indices. The first 2 surveys occurred during the weeks of June 13-17 (survey 1) and June 27-July 1 (survey 2). The TNS project samples 31 stations that contribute to the index during each biweekly survey. In 2011, TNS added 8 new non-index stations to each survey to improve distribution coverage and increase detection of delta smelt in Cache Slough (3 stations) and the Sacramento River Deep Water Ship Channel (SDWSC) (5 stations) (Figure 2).

In survey 1, delta smelt were caught at index stations in Montezuma Slough (n = 34) and Suisun Bay (n = 52), and were also caught at non-index stations in Napa River (n = 2), Cache Slough (n = 49), and SDWSC (n = 66). In survey 2, delta smelt were caught at index stations in Montezuma Slough (n = 22), Suisun Bay (n = 33), and lower Sacramento River (n = 3). In addition, delta smelt were caught at non-index stations in Cache Slough (n = 80) and SDWSC (n = 10). Thus, almost 60 percent of the overall delta smelt catch came from Cache Slough and SDWSC, outside the area used for the abundance index calculation.

Attachments: 2

Cc: Marty Gingras  
Scott Cantrell

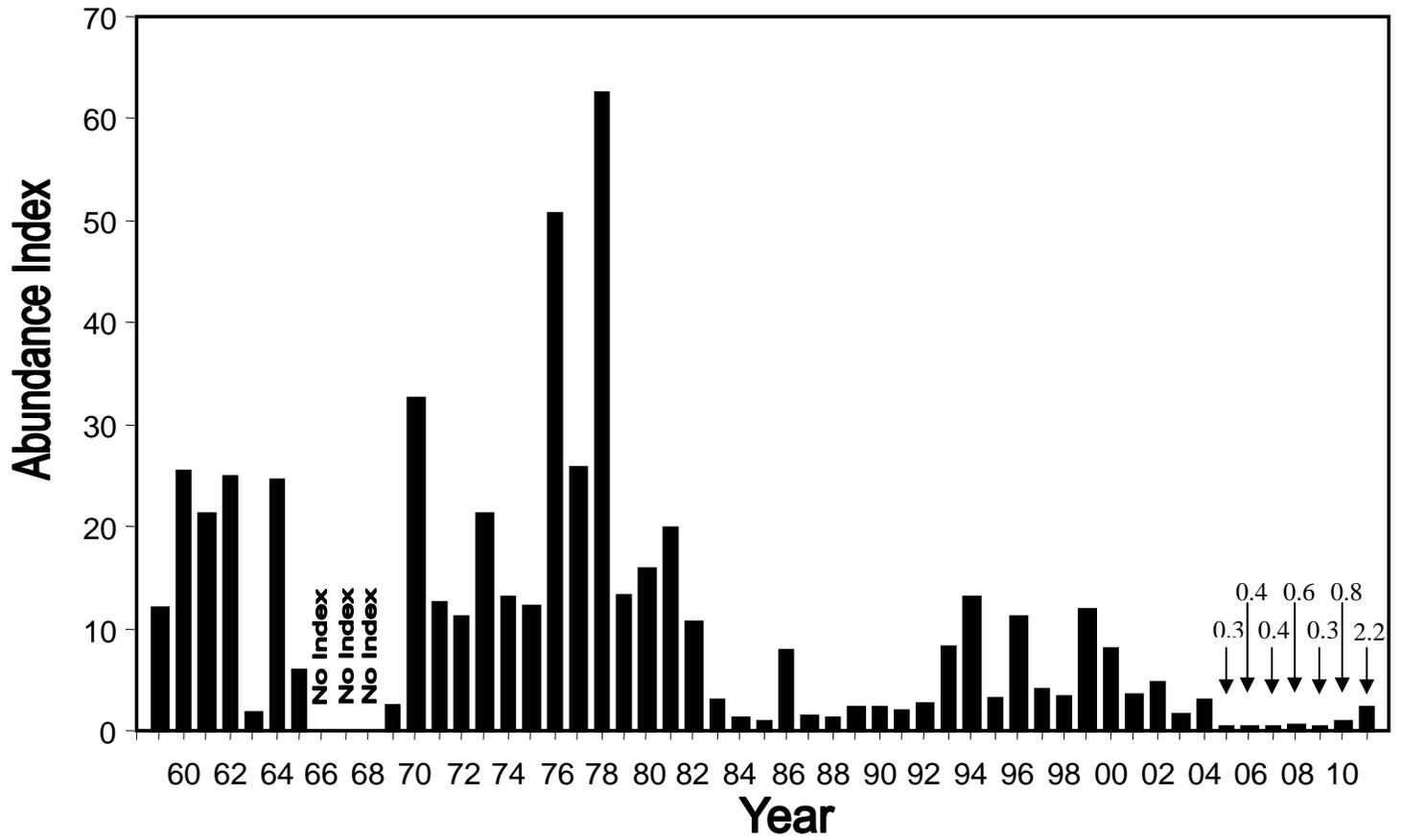


Figure 1. Summer Townet Survey age-0 delta smelt abundance indices, 1959-2011.

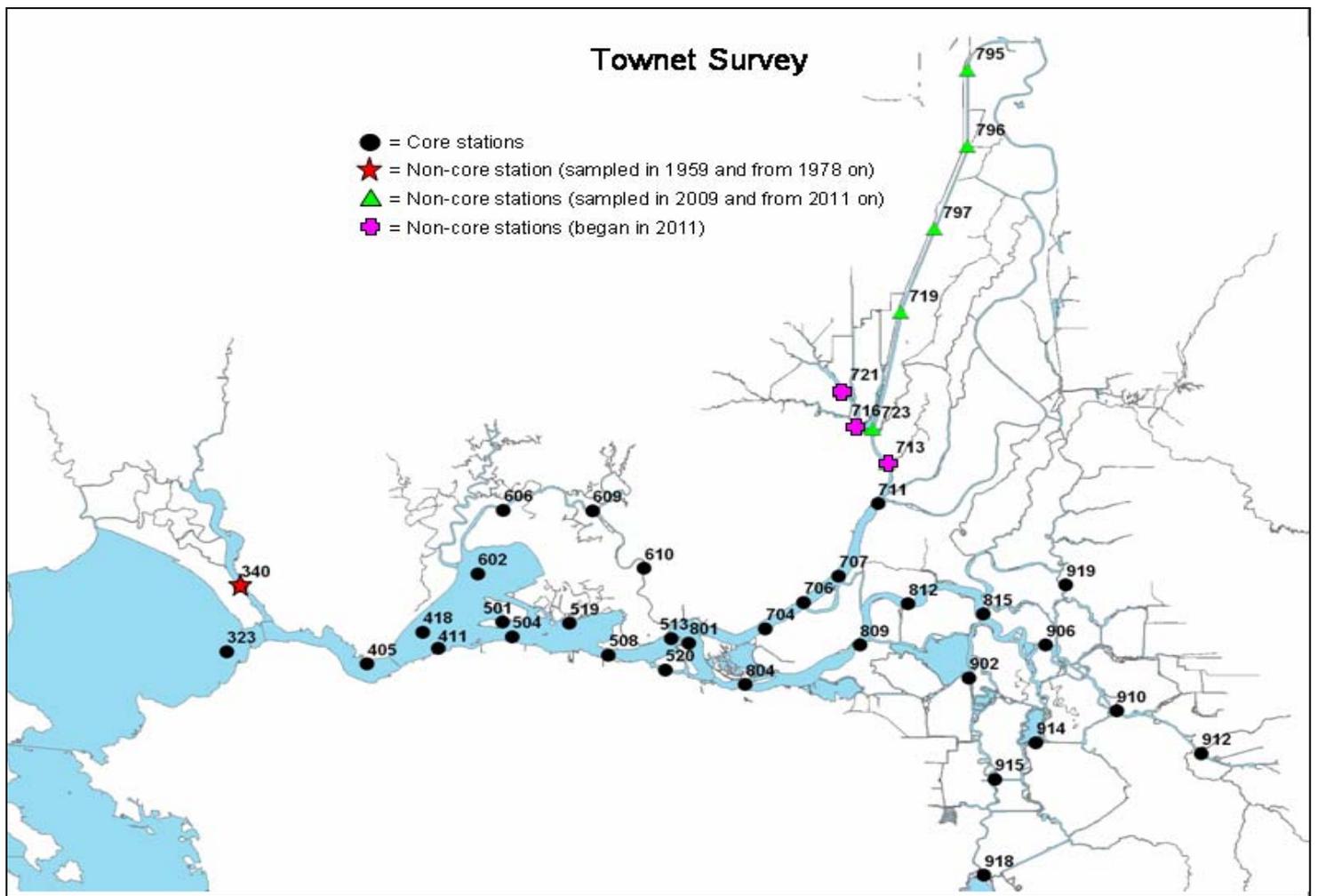


Figure 2. Map of Summer Townet Survey index and non-index station locations.